

Export Corn

Corn Grades and Grade Requirements

Corn is divided into three classes: Yellow corn, White Corn, and Mixed corn. There are no subclasses of corn. Each class of corn is divided into five U.S. numerical grades and U.S.

Sample grade. Special grades are provided to emphasize the qualities or conditions affecting the value of the corn. These special grades are made a part of the grade designation but do not affect the numerical or Sample grade designation.

U.S. Standards for Corn

Grade	Minimum test weight per bushel (pounds)	Maximum limits of -		
		Damaged kernels		Broken corn and foreign material (percent)
		Heat-damaged kernels (percent)	Total damaged kernels (percent)	
U.S. No. 1	56.0	0.1	3.0	2.0
U.S. No. 2	54.0	0.2	5.0	3.0
U.S. No. 3	52.0	0.5	7.0	4.0
U.S. No. 4	49.0	1.0	10.0	5.0
U.S. No. 5	46.0	3.0	15.0	7.0
U.S. Sample grade				

U.S. Sample grade is corn that:

- (a) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4, or 5; or
- (b) Contains stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans, 8 or more cockleburrs, 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), or animal filth in excess of 0.20 percent in 1,000 grams; or
- (c) Has a musty, sour, or commercially objectionable foreign odor; or
- (d) Is heating or otherwise of distinctly low quality.

Corn

Definitions

Test weight (lb/bu) is pounds of grain per Winchester bushel (2,150.42 cubic inches) as determined using an approved device. Test weight is determined before the removal of broken corn and foreign material.

Test weight (kg/hl) is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

Moisture is the water content of grain as determined by an approved moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

Broken corn is all matter that passes readily through a 12/64-inch round-hole sieve and over a 6/64-inch round-hole sieve. The percentage of broken corn by itself does not affect the numerical grade.

Foreign material is all matter that passes readily through a 6/64-inch round-hole sieve and all matter other than corn that remains on top of the 12/64-inch round-hole sieve. The percentage of foreign material by itself does not affect the numerical grade.

Broken corn and foreign material is all matter that passes readily through a 12/64-inch sieve, and all matter other than corn that remains in the sieved sample.

Damaged kernels (total) are kernels and pieces of corn kernels that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

Heat-damaged kernels are kernels and pieces of corn kernels that are materially discolored by excessive respiration, with dark discoloration extending out of the germ, through the sides, and into the back of the kernel.

Mixed corn is corn that does not meet the color requirements for either of the classes Yellow corn or White corn, and which includes White-capped Yellow corn.

Oil, protein, and starch percentages in corn are determined by an approved near infrared transmittance (NIRT) instrument calibrated to approved methods. Percent corn oil, protein, or starch is reported on a dry matter basis unless other basis is requested. The level of oil, protein, or starch in a sample does not affect the numerical grade.

Table 9. U.S. Corn Exports: Number of lots and quantity exported by class and grade, 1998-2000

Class	Grade	1998		1999		2000	
		Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
Yellow Corn	U.S. No. 1	51	446,083	83	559,986	124	992,877
	U.S. No. 2	1,023	18,464,394	1,279	26,042,632	1,331	27,629,462
	U.S. No. 3	598	18,946,037	662	21,881,200	575	15,737,011
	U.S. No. 4	2	25,675	2	2,686	1	1,193
	U.S. No. 5	3	14,024	--	--	--	--
	U.S. Sample Grade	--	--	--	--	2	3,734
	Not inspected	2	4,962	1	2,548	1	2,304
	All lots	1,679	37,901,175	2,027	48,489,052	2,034	44,366,581
	White Corn	U.S. No. 1	5	29,327	29	200,788	55
U.S. No. 2		47	746,293	64	953,055	49	740,997
U.S. No. 3		4	10,990	--	--	1	2,560
U.S. No. 5		--	--	--	--	--	--
U.S. Sample Grade		1	1,435	--	--	--	--
All lots		57	788,045	93	1,153,843	105	1,221,283
All Classes		U.S. No. 1	56	475,410	112	760,774	179
	U.S. No. 2	1,070	19,210,687	1,343	26,995,687	1,380	28,370,459
	U.S. No. 3	602	18,957,027	662	21,881,200	576	15,739,571
	U.S. No. 4	2	25,675	2	2,686	1	1,193
	U.S. No. 5	3	14,024	--	--	--	--
	U.S. Sample Grade	1	1,435	--	--	2	3,734
	Not inspected	2	4,962	1	2,548	1	2,304
	All lots	1,736	38,689,220	2,120	49,642,895	2,139	45,587,864

-- = No lots reported in this category.

Not inspected = These lots were sold without grade designation.

Table 10. Summary of export Yellow corn quality, 1998-2000

Factor	Grade	Grade Limit	No. of Lots	1998			1999			2000					
				Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	
Test Weight (lb/bu)	U.S. No. 1	56.0	51	57.9	56.0	60.3	83	58.0	56.2	60.2	124	58.2	56.3	60.7	
	U.S. No. 2	54.0	1,023	56.9	54.0	60.9	1,279	57.1	54.0	61.4	1,330	57.3	54.0	61.0	
	U.S. No. 3	52.0	597	57.0	53.0	59.9	662	57.3	52.6	60.6	575	57.5	53.1	60.9	
	U.S. No. 4	49.0	2	56.6	56.6	56.6	2	55.4	51.4	56.5	1	51.9	51.9	51.9	
	U.S. No. 5	46.0	3	55.8	54.4	57.5	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	2	51.3	51.2	51.5
	All lots	N/A	1,676	57.0	53.0	60.9	2,026	57.2	51.4	61.4	2,032	57.4	51.2	61.0	
Test Weight (kg/hl)	U.S. No. 1	N/A	51	74.5	72.1	77.6	83	74.7	72.3	77.5	124	74.9	72.5	78.1	
	U.S. No. 2	N/A	1,023	73.2	69.5	78.4	1,279	73.5	69.5	79.0	1,330	73.8	69.5	78.5	
	U.S. No. 3	N/A	597	73.4	68.2	77.1	662	73.7	67.8	78.0	575	74.0	68.4	78.3	
	U.S. No. 4	N/A	2	72.9	72.8	72.9	2	71.3	66.2	72.7	1	66.8	66.8	66.8	
	U.S. No. 5	N/A	3	71.8	70.1	74.0	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	2	66.1	65.9	66.3
	All lots	N/A	1,676	73.3	68.2	78.4	2,026	73.6	66.2	79.0	2,032	73.9	65.9	78.5	
Moisture	U.S. No. 1	N/A	51	14.3	13.7	14.9	83	14.4	13.5	15.0	124	14.1	12.6	14.9	
	U.S. No. 2	N/A	1,023	14.3	12.6	15.3	1,279	14.2	11.2	15.1	1,327	14.0	11.5	15.0	
	U.S. No. 3	N/A	597	14.6	5.2	15.5	661	14.4	13.2	15.1	574	14.1	12.7	15.3	
	U.S. No. 4	N/A	2	14.1	14.1	14.2	2	14.0	14.0	14.1	1	13.4	13.4	13.4	
	U.S. No. 5	N/A	3	14.0	13.8	14.1	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	2	13.7	13.5	13.8
	All lots	N/A	1,676	14.5	5.2	15.5	2,025	14.3	11.2	15.1	2,029	14.0	11.5	15.3	
Heat-damaged Kernels	U.S. No. 1	0.1	51	0.0	0.0	0.0	83	0.0	0.0	0.0	124	0.0	0.0	0.0	
	U.S. No. 2	0.2	1,023	0.0	0.0	0.1	1,279	0.0	0.0	0.1	1,330	0.0	0.0	0.1	
	U.S. No. 3	0.5	597	0.0	0.0	0.2	662	0.0	0.0	0.1	575	0.0	0.0	0.1	
	U.S. No. 4	1.0	2	0.0	0.0	0.0	2	0.1	0.0	0.1	1	0.0	0.0	0.0	
	U.S. No. 5	3.0	3	0.0	0.0	0.0	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	All lots	N/A	1,676	0.0	0.0	0.2	2,026	0.0	0.0	0.1	2,032	0.0	0.0	0.1	
Damaged Kernels (Total)	U.S. No. 1	3.0	51	2.1	0.7	3.0	83	1.6	0.0	2.9	124	1.4	0.2	2.7	
	U.S. No. 2	5.0	1,023	3.2	0.6	5.0	1,279	2.5	0.0	4.9	1,330	2.1	0.3	4.9	
	U.S. No. 3	7.0	597	4.1	0.5	7.0	662	2.8	0.0	6.7	575	2.0	0.0	5.3	
	U.S. No. 4	10.0	2	1.4	1.1	7.6	2	3.3	3.2	3.6	1	1.0	1.0	1.0	
	U.S. No. 5	15.0	3	3.1	0.5	5.5	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	2	1.2	1.0	1.3
	All lots	N/A	1,676	3.7	0.5	7.6	2,026	2.6	0.0	6.7	2,032	2.0	0.0	5.3	

continued

Table 10. Summary of export Yellow corn quality, 1998-2000--Continued

Factor	Grade	1998					1999					2000			
		Grade Limit	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	
Broken Corn and Foreign Material	U.S. No. 1	2.0	51	1.8	1.1	2.0	83	1.7	1.0	2.0	124	1.6	0.8	2.0	
	U.S. No. 2	3.0	1,023	2.7	1.0	3.0	1,279	2.6	0.0	3.0	1,327	2.7	0.7	3.0	
	U.S. No. 3	4.0	597	3.4	0.0	4.0	662	3.3	1.4	4.0	575	3.3	0.8	4.0	
	U.S. No. 4	5.0	2	4.0	1.5	4.1	2	3.0	1.3	3.5	1	1.6	1.6	1.6	
	U.S. No. 5	7.0	3	4.5	2.3	6.1	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	2	1.8	1.6	1.9	
	All lots	N/A	1,676	3.0	0.0	6.1	2,026	2.9	0.0	4.0	2,029	2.9	0.7	4.0	
Broken Corn	U.S. No. 1	N/A	3	1.4	1.3	1.5	3	1.3	1.3	1.4	7	1.1	0.9	1.3	
	U.S. No. 2	N/A	182	2.0	1.2	2.7	178	1.9	0.7	2.4	168	2.0	0.7	2.4	
	U.S. No. 3	N/A	46	2.5	1.8	3.6	106	2.2	0.1	2.9	122	2.2	0.1	2.9	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. No. 5	N/A	1	1.7	1.7	1.7	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	All lots	N/A	232	2.2	1.2	3.6	287	2.1	0.1	2.9	297	2.1	0.1	2.9	
Foreign Material	U.S. No. 1	N/A	3	0.4	0.3	0.4	3	0.3	0.3	0.4	7	0.3	0.3	0.4	
	U.S. No. 2	N/A	182	0.7	0.3	2.0	179	0.6	0.3	2.8	166	0.7	0.3	1.8	
	U.S. No. 3	N/A	45	1.0	0.5	1.5	107	0.8	0.3	3.0	122	0.8	0.1	2.5	
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	U.S. No. 5	N/A	1	0.6	0.6	0.6	--	--	--	--	--	--	--	--	
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--	
	All lots	N/A	231	0.8	0.3	2.0	289	0.7	0.3	3.0	295	0.7	0.1	2.5	

N/A = Does not apply.

-- = No lots reported in this category.

Table 11. Summary of export White corn quality, 1998-2000

Factor	Grade	Grade Limit	1998				1999				2000			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	56.0	5	59.1	57.4	60.0	29	59.8	56.6	62.1	55	59.5	56.3	62.0
	U.S. No. 2	54.0	47	59.2	56.4	60.6	64	59.6	57.9	62.1	49	59.7	58.2	61.0
	U.S. No. 3	52.0	4	58.7	58.0	60.2	--	--	--	--	1	57.9	57.9	57.9
	U.S. Sample Grade	N/A	1	58.1	58.1	58.1	--	--	--	--	--	--	--	--
	All lots	N/A	57	59.2	56.4	60.6	93	59.6	56.6	62.1	105	59.6	56.3	62.0
Test Weight (kg/hl)	U.S. No. 1	N/A	5	76.1	73.9	77.2	29	76.9	72.9	79.9	55	76.6	72.5	79.8
	U.S. No. 2	N/A	47	76.3	72.6	78.0	64	76.7	74.6	79.9	49	76.9	74.9	78.5
	U.S. No. 3	N/A	4	75.6	74.7	77.5	--	--	--	--	1	74.6	74.6	74.6
	U.S. Sample Grade	N/A	1	74.8	74.8	74.8	--	--	--	--	--	--	--	--
	All lots	N/A	57	76.2	72.6	78.0	93	76.7	72.9	79.9	105	76.8	72.5	79.8
Moisture	U.S. No. 1	N/A	5	13.8	13.4	14.8	29	13.9	12.9	14.9	54	13.5	12.8	14.4
	U.S. No. 2	N/A	47	13.9	11.1	14.5	64	14.0	11.9	14.6	49	13.6	12.9	14.5
	U.S. No. 3	N/A	4	13.7	13.2	14.8	--	--	--	--	1	13.1	13.1	13.1
	U.S. Sample Grade	N/A	1	14.6	14.6	14.6	--	--	--	--	--	--	--	--
	All lots	N/A	57	13.9	11.1	14.8	93	14.0	11.9	14.9	104	13.5	12.8	14.5
Heat-damaged Kernels	U.S. No. 1	0.1	5	0.0	0.0	0.0	29	0.0	0.0	0.0	55	0.0	0.0	0.0
	U.S. No. 2	0.2	47	0.0	0.0	0.0	64	0.0	0.0	0.0	49	0.0	0.0	0.0
	U.S. No. 3	0.5	4	0.0	0.0	0.0	--	--	--	--	1	0.0	0.0	0.0
	U.S. Sample Grade	N/A	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	All lots	N/A	57	0.0	0.0	0.0	93	0.0	0.0	0.0	105	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1	3.0	5	1.7	1.1	2.4	29	1.1	0.2	2.9	55	1.1	0.2	2.7
	U.S. No. 2	5.0	47	2.6	0.5	4.9	64	1.9	0.3	5.0	49	1.2	0.4	3.5
	U.S. No. 3	7.0	4	3.6	2.9	6.1	--	--	--	--	1	0.8	0.8	0.8
	U.S. Sample Grade	N/A	1	5.6	5.6	5.6	--	--	--	--	--	--	--	--
	All lots	N/A	57	2.6	0.5	6.1	93	1.7	0.2	5.0	105	1.1	0.2	3.5
Broken Corn and Foreign Material	U.S. No. 1	2.0	5	1.6	1.2	1.8	29	1.7	0.8	2.0	55	1.6	0.8	2.0
	U.S. No. 2	3.0	47	2.5	1.3	3.0	64	2.3	0.8	3.0	48	2.1	1.1	2.9
	U.S. No. 3	4.0	4	3.1	1.3	3.8	--	--	--	--	1	3.7	3.7	3.7
	U.S. Sample Grade	N/A	1	2.1	2.1	2.1	--	--	--	--	--	--	--	--
	All lots	N/A	57	2.5	1.2	3.8	93	2.2	0.8	3.0	104	1.9	0.8	3.7

continued

Table 11. Summary of export White corn quality, 1999-2000--Continued

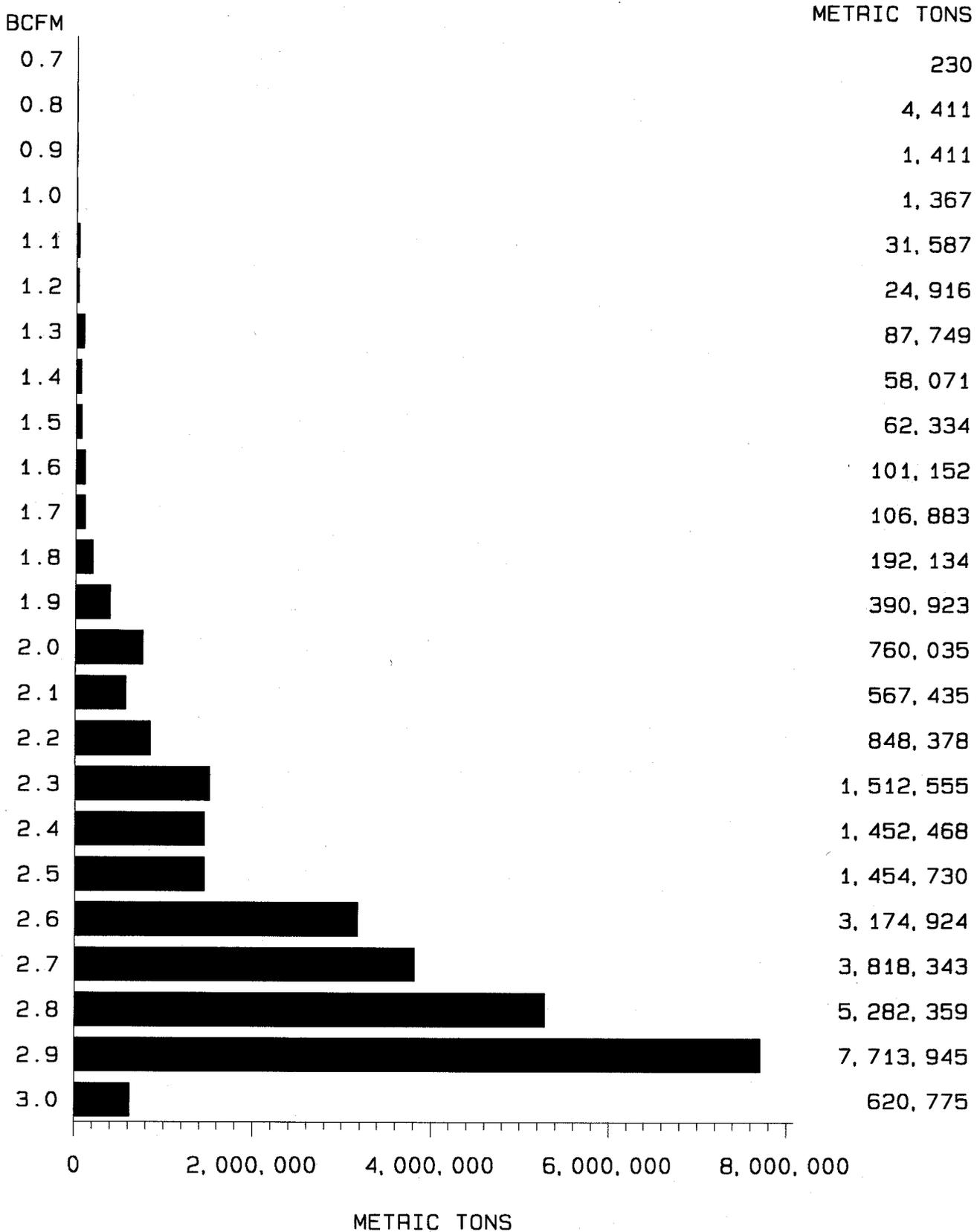
Factor	Grade	Grade Limit	1998			1999			2000					
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Broken Corn	U.S. No. 1	N/A	--	--	--	--	10	1.4	1.0	1.7	12	1.2	1.0	1.4
	U.S. No. 2	N/A	6	1.7	1.0	2.2	4	1.2	0.6	2.2	1	1.5	1.5	1.5
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	2.8	2.8	2.8
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	6	1.7	1.0	2.2	14	1.3	0.6	2.2	14	1.3	1.0	2.8
Foreign Material	U.S. No. 1	N/A	--	--	--	--	10	0.4	0.3	0.5	12	0.4	0.3	0.5
	U.S. No. 2	N/A	6	0.5	0.3	0.8	4	0.7	0.1	1.8	1	0.5	0.5	0.5
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	0.9	0.9	0.9
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	6	0.5	0.3	0.8	14	0.4	0.1	1.8	14	0.4	0.3	0.9

N/A=Does not apply.

--=No lots reported in this category.

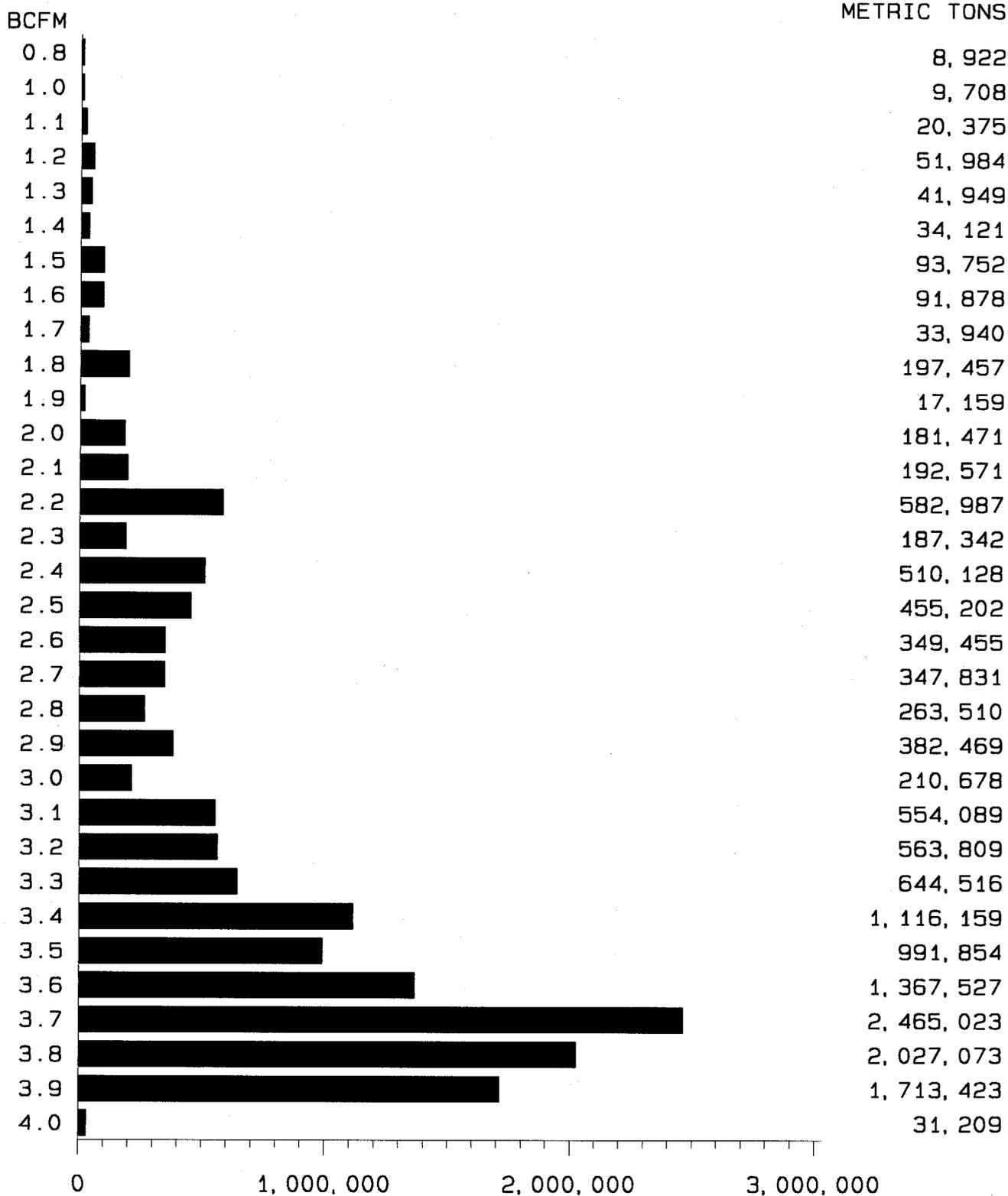
U.S. CORN EXPORTED, 2000

DISTRIBUTION FOR BCFM – GRADE 2



U.S. CORN EXPORTED, 2000

DISTRIBUTION FOR BCFM — GRADE 3



METRIC TONS